

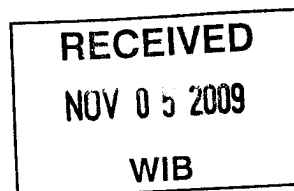


Stantec Consulting Services Inc.
350 Missouri Avenue Suite 100
Jeffersonville IN 47130-3001
Tel: (812) 285-4060
Fax: (812) 285-4061

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AI 7331

Stantec

November 3, 2009
File: 174438002



Kentucky Division of Water
200 Fair Oaks Lane, Fourth Floor
Frankfort, Kentucky 40601

**Reference: Site 1: Proposed Construction of In-Stream Grade Control on Banklick Creek
Kenton County Sanitation District #1
Fort Wright, Kenton County, Kentucky**

Attention: Mr. Gary Wells

Dear Mr. Wells:

This project is the first site of a three-site project aimed to address channel instability of Banklick Creek that has exposed portions of the Southern Kenton County Interceptor sanitary sewer line. This project, referred to as Site 1, has undergone significant degradation, prompting emergency stabilization of the sewer line by SD#1. As the emergency action has initiated permit requirements additional to those for Sites 2 and 3, Site 1 has been placed as a separate project.

Due to highly erodible shale bedrock, both natural channel stream design techniques, as well as concrete stabilizing structures will be utilized to stabilize the stream adjacent to the sewer line crossing encasement. The proposed project will effectively arrest headward channel incision, which is threatening the sewer line stability and stream quality, through the construction of three structurally reinforced concrete cascades intended to provide the same functionality of a cross vane. To date, the sewer line has been reinforced with concrete encasement, and a side channel diversion has been stabilized with the construction of limestone boulder cross vanes. The total footprint impact of all construction activities is 400 linear feet. Stantec found that proposed construction activities will occur at elevations below the historic level of the stream bed, and will not have detrimental effects on the current Federal Emergency Management Agency's (FEMA) Flood Profiles.

For your information, a copy of this application is also being sent to the WQC Section. The timeline for this project is especially sensitive, as the funding to be used for this work is from the American Recovery and Reinvestment Act and must be utilized by January 1, 2010. Further information on the sensitive time-line was outlined in a hardship letter submitted to Mr. Barry Elmore of KDOW on October 30, 2009.

Thanks for your help and please direct any questions to me at (812) 285-4082.

Sincerely,

STANTEC CONSULTING SERVICES INC.

John Dovak
Project Manager
Tel: (812) 285-4082
Fax: (812) 285-4061
John.Dovak@stantec.com

Attachment: Section 401 WQC Permit Package

Application on page 7



Stantec

**Proposed Construction of
In-Stream Grade Control on
Banklick Creek**

Prepared for:
Kenton County Sanitation District #1
of Fort Wright, Kenton County,
Kentucky

November 3, 2009

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Stantec

**Proposed Construction of
In-Stream Grade Control on
Banklick Creek**

Prepared for:
Kenton County Sanitation District #1
of Fort Wright, Kenton County,
Kentucky

November 3, 2009

APPLICATION OUTLINE

SITE 1: PROPOSED CONSTRUCTION OF IN-STREAM GRADE CONTROL ON BANKLICK CREEK

Kenton County Sanitation District #1
Fort Wright, Kenton County, Kentucky

I. General WQC/ Floodplain Permit Application

1. Permit Application Form
2. Project Site Map
3. Hardship Justification Letter

II. Proposed Plan View Drawings

III. Stream Elevation Comparison (Proposed vs. 1988)

1. Southern Kenton County Interceptor Sewer Plan & Profile (1988)

IV. Photo Log of Existing Conditions

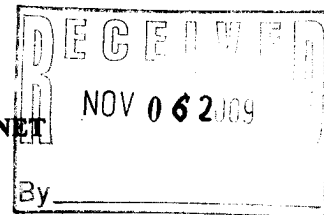
V. Copy of Pre-Construction Notification

(Submitted to USACE December, 2008)

I. Section 401: General WQC/Floodplain
Permit Application

1. Permit Application Form

COMMONWEALTH OF KENTUCKY
NATURAL RESOURCES & ENVIRONMENTAL PROTECTION CABINET
DEPARTMENT FOR ENVIRONMENTAL PROTECTION
DIVISION OF WATER



APPLICATION FOR PERMIT TO CONSTRUCT ACROSS OR ALONG A STREAM
AND / OR WATER QUALITY CERTIFICATION

Chapter 151 of the Kentucky Revised Statutes requires approval from the Division of Water prior to any construction or other activity in or along a stream that could in any way obstruct flood flows or adversely impact water quality. If the project involves work in a stream, such as bank stabilization, dredging or relocation, you will also need to obtain a 401 Water Quality Certification (WQC) from the Division of Water. This completed form will be forwarded to the Water Quality Branch for WQC processing. The project may not start until all necessary approvals are received from the KDOW. For questions concerning the WQC process, contact the WQC section at 502/564-3410.

If the project will disturb more than 1 acre of soil, you will also need to complete the attached Notice of Intent for Storm Water Discharges, and return both forms to the Floodplain management Section of the KDOW. This general permit will require you to create an implement an erosion control plan for the project.

1. OWNER: Sanitation District No. 1, Fort Wright, Kentucky
Give name of person(s), company, governmental unit, or other owner of proposed project.
MAILING ADDRESS: 1045 Eaton Drive, Ft. Wright, Kentucky 41017
TELEPHONE #: 859-578-7461 EMAIL: kboyle@sdl.org
2. AGENT: Stantec Consulting Services, Inc., Attention: John Dovak
Give name of person(s) submitting application, if other than owner.
ADDRESS: 350 Missouri Avenue, Suite 100,
TELEPHONE #: (812) 285-4060 EMAIL: John.Dovak@stantec.com
3. ENGINEER: John G. Banton, PE P.E. NUMBER: KY 21645
Contact Division of Water if waiver can be granted.
TELEPHONE #: (513) 842-8215 EMAIL: John.Banton@stantec.com
4. DESCRIPTION OF CONSTRUCTION: This project is the first site of a three-site project aimed to address channel instability of Banklick Creek that has exposed portions of the Southern Kenton County Interceptor sanitary sewer line. This project, referred to as Site 1, has undergone significant degradation, prompting emergency stabilization action by SD1, and therefore placing it as a separate project due to a more extensive permitting process than Sites 2 and 3. Due to highly erodible shale bedrock, both natural channel stream design techniques, as well as concrete stabilizing structures will be utilized to stabilize the sewer line crossing encasement. The proposed project will effectively arrest headward channel incision, which is threatening the sewer line stability and stream quality, through the construction of three structurally reinforced concrete cascades intended to provide the same functionality of a cross vane. To date, the sewer line has been reinforced with concrete encasement, and a side channel diversion has been stabilized with the construction of limestone boulder cross vanes.
Describe the type and purpose of construction and describe stream impact.
5. COUNTY: Kenton NEAREST COMMUNITY: Ft. Wright
6. USGS QUAD NAME: Independence LATITUDE/LONGITUDE: 38.97213° N, 84.55603° W
7. STREAM NAME: Banklick Creek WATERSHED SIZE (in acres): 28,620 acres
8. LINEAR FEET OF STREAM IMPACTED: 400 Linear Feet of Impact from stream structure construction and associated native fill activities
9. DIRECTIONS TO SITE: From Louisville, take I-71 north to I-75 north. Take exit 178 off I-75 north, then turn right on Mt. Zion Road (KY 536). Turn left on Dixie Highway (US 25). Next, turn right on Richardson Road (KY 1303). The road will make a sharp turn to the left, then make the third right to stay on Richardson Road (KY 1829). The project takes place in the park on the left side of the road.

SM = 10.6

10. IS ANY PORTION OF THE REQUESTED PROJECT NOW COMPLETE? ☒ Yes ☐ No If yes, identify the completed portion on the drawings you submit and indicate the date activity was completed. DATE: December, 2008
11. ESTIMATED BEGIN CONSTRUCTION DATE: December, 2009
12. ESTIMATED END CONSTRUCTION DATE: May, 2010
13. HAS A PERMIT BEEN RECEIVED FROM THE US ARMY, CORPS of ENGINEERS? ☐ Yes ☒ No If yes, attach a copy of that permit.
14. THE APPLICANT **MUST** ADDRESS PUBLIC NOTICE:

(a) PUBLIC NOTICE HAS BEEN GIVEN FOR THIS PROPOSAL BY THE FOLLOWING MEANS:

- ☐ Public notice in newspaper having greatest circulation in area (provide newspaper clipping or affidavit)
- ☐ Adjacent property owner(s) affidavits (Contact Division of Water for requirements.)

(b) X I REQUEST WAIVER OF PUBLIC NOTICE BECAUSE:

Project will have minimal floodplain impact

Contact Division of Water for requirements.

15. I HAVE CONTACTED THE FOLLOWING CITY OR COUNTY OFFICIALS CONCERNING THIS PROJECT:

Give name and title of person(s) contacted and provide copy of any approval city or county may have issued.

16. LIST OF ATTACHMENTS: USGS Location Map, Plan View Drawings
List plans, profiles, or other drawings and data submitted. Attach a copy of a 7.5 minute USGS topographic map clearly showing the project location.

17. I, Kyle Boyle (owner) CERTIFY THAT THE OWNER OWNS OR HAS EASEMENT RIGHTS ON ALL PROPERTY ON WHICH THIS PROJECT WILL BE LOCATED OR ON WHICH RELATED CONSTRUCTION WILL OCCUR (for dams, this includes the area that would be impounded during the design flood).

18. REMARKS: _____

I hereby request approval for construction across or along a stream as described in this application and any accompanying documents. To the best of my knowledge, all the information provided is true and correct.

SIGNATURE: Kyle Boyle

Owner or Agent sign here. (If signed by Agent, a Power of Attorney should be attached.)

DATE: 9-18-09

SIGNATURE OF LOCAL FLOODPLAIN COORDINATOR: [Signature]

Permit application will be returned to applicant if not properly endorsed by the local floodplain coordinator.

DATE: 9-18-09 / 11-3-09

SUBMIT APPLICATION AND ATTACHMENTS TO:

Floodplain Management Section
Kentucky Division of Water
Water Quality Certification Section
200 Fair Oaks Lane
Frankfort, KY 40601

2. Project Site Map

3. Hardship Justification Letter



Stantec

Stantec Consulting Services Inc.
350 Missouri Avenue Suite 100
Jeffersonville IN 47130-3001
Tel: (812) 285-4060
Fax: (812) 285-4061

Submitted October, 30 2009

October 30, 2009

Kentucky Division of Water

Floodplain Management Section
200 Fair Oaks Lane
Frankfort, KY. 40601

Attention: Mr. Barry Elmore

Reference: Hardship justification for AI# 7331, Application # 19884
Sanitary District #1, Banklick Creek sewer line protection, Kenton Co.

Dear Mr. Elmore:

On behalf of our client, SD#1, Stantec Consulting Services Inc. (Stantec) submitted a floodplain permit application for the repair of existing sanitary sewer line crossings in Banklick Creek in Kenton Co. We understand the application has been determined to be administratively complete on October 7th and is awaiting review by your staff.

Stantec would like to take this opportunity to request that this project be given an expedited review for two reasons:

- The funding to be used for this work is from the American Recovery and Reinvestment Act and must be utilized by January 1, 2010. All other permits have been issued for this project, the floodplain permit is the only remaining authorization needed.
- The project is intended to return the stream to pre-existing elevation to repair a deteriorating sanitary sewer line as it crosses Banklick Creek in two locations. Preventing failure of the sewer line is a priority of SD#1 and KDOW.

Thank you for your help. If you have any questions, please do not hesitate to call me at (812)285-4060.

STANTEC CONSULTING SERVICES INC.

John Dovak

John Dovak
Project Manager
Tel: (812) 285-4082
Fax: (812) 285-4061
John.Dovak@stantec.com

c. Jim Turner, SD#1

II. Proposed Plan View Drawings

Melchior



SHEET

**SOUTHERN KENTON COUNTY INTERCEPTOR
BANKLICK CREEK
INDEPENDENCE, KENTON COUNTY, KENTUCKY**



www.singaporeair.com

III. Stream Elevation Comparison
(Proposed vs. 1988)

STREAM ELEVATION COMPARISON (PROPOSED VS. 1988 STREAM ELEVATION)

SITE 1: PROPOSED CONSTRUCTION OF IN-STREAM GRADE CONTROL ON BANKLICK CREEK

Kenton County Sanitation District #1 – Banklick Creek
Fort Wright, Kenton County, Kentucky

Stantec Consulting Services Inc. (Stantec) has preformed a review of historic topographic and geomorphic data on Banklick Creek from Site 1, in order to determine whether the proposed project will cause a rise in the baseflood elevation (BFE) of the current effective Federal Emergency Management Agency's (FEMA) Flood Insurance Rate Map (FIRM).

A comparison was made between the proposed in-stream construction plans developed by Stantec, and the Southern Kenton County Sanitary Sewer Interceptor Plan & Profile sheets created in 1988. In locations where the sewer line crosses the stream, the nearest proposed structure invert elevation was plotted on the 1988 profile. The attached figures show the proposed constructed ground elevation plotted against the 1988 historic ground elevation.

At the site location, the proposed ground elevation falls below the historic ground in 1988 due to natural erosion and incision of the channel. The concrete encasement constructed over the existing sewer line has a top elevation of 651.8. The elevation of the historic ground in 1988 is 653.7, meaning the proposed cascade activities will fall approximately 2 feet below historic elevations. Since proposed top elevation of these structures is two feet below the historical elevation of the channel/thalweg, no increase in BFE is anticipated from this project.

1. Southern Kenton County Interceptor Sewer
Plan & Profile

IV. Photo Log of Existing Conditions

V. Copy of Pre-Construction Notification
(Submitted to USACE December, 2008)



Stantec

Stantec Consulting Services Inc.
11687 Lebanon Road
Cincinnati OH 45241-2012
Tel: (513) 842-8200
Fax: (513) 842-8250

December 19, 2008
File: 174438002L01

U.S. Army Corps of Engineers
Louisville District
P.O. Box 59
Louisville, Kentucky 40401-0059
Attention: CELRL-OP-F

**Reference: Pre-Construction Notification for Stabilization of Sanitary Sewer Line Crossing under
Nationwide Permit #12**

Dear Ms. Devine:

On behalf of our client, Sanitation District No. 1, in Ft. Wright, Kentucky, Stantec Consulting Inc., requests issuance of a Nationwide Permit (NWP) No. 12 to authorize actions intended to stabilize a sanitary sewer line crossing in Banklick Creek in Kenton County, Kentucky.

PROSPECTIVE PERMITTEE INFORMATION

Mr. Kyle Boyle
Project Engineer
Sanitation District No. 1
1045 Eaton Drive
Ft. Wright, Kentucky 41017

LOCATION OF THE PROPOSED PROJECT

This site is located north and east of Banklick Woods Park (38.97213° N, 84.55603° W) in Banklick Creek in Kenton County, Kentucky (Attachment A).

DESCRIPTION OF THE PROPOSED PROJECT

The project will address channel instability that exposed portions of the Southern Kenton County Interceptor sanitary sewer line using natural channel design techniques. Headward channel incision currently threatens an existing 18" sanitary sewer encasement (Figures 1 and 2). This project constitutes the first of three different projects designed to protect the Southern Kenton County Interceptor. Projects number two and three will occur later in time as channel conditions at these sites represent a lesser risk of damage to existing sanitary sewer crossings. These projects will proceed as human and financial resources allow.

The Banklick Creek project area occurs roughly one-mile upstream of USGS stream gauge 03254550 and drains a catchment approximately 30 square miles in area. Daily discharges at this site range between 2,000 cubic feet per second during storm events to summer low flows of less than 0.1 cubic feet per second. The site is within the Outer Bluegrass Ecoregion (Woods et al. 2002) and is characterized by locally variable but generally hilly topography. Soils tend to be well developed, fertile and underlain by limestones, shales, and dolomites of the Late Ordovician and Silurian periods (McDowell 1986). The Kope formation shales present in the project area are notoriously unstable.

Stantec

September 8, 2009
CELRL-OP-F
Page 5 of 6

Reference: Pre-Construction Notification for Stabilization of Sanitary Sewer Line Crossing under Nationwide Permit #12

HISTORIC PROPERTIES

Impacts to National Register properties or sites are not anticipated because 1) most construction will occur below the ordinary high water line and 2) areas in the vicinity of the sanitary sewer line were disturbed during initial placement. Nonetheless, if any type of artifact is discovered during construction, the State Historic Preservation Office will be notified immediately. Correspondence documenting consultation with the Kentucky State Historic Preservation Officer is provided in Attachment D.

Sincerely,

STANTEC CONSULTING SERVICES INC.

Cody Fleece
Senior Ecologist

Attachment

- c. Kyle Boyle, Sanitary District No. 1
Scott Peyton, Stantec Consulting Services Inc.
Virgil Lee Andrews, U.S. Fish and Wildlife Service
Lori Stahlgren, Kentucky Heritage Council and State Historic Preservation Office

Stantec

September 8, 2009
CELRL-OP-F
Page 6 of 6

Reference: Pre-Construction Notification for Stabilization of Sanitary Sewer Line Crossing under Nationwide Permit #12

LITERATURE CITED

McDowell, R.C. 1986. The Geology of Kentucky – A Text to Accompany the Geologic Map of Kentucky. U.S. Geological Survey professional paper; 1151-H. 68 pp.

U.S. Fish and Wildlife Service (USFWS). 2007a. Indiana Bat (*Myotis sodalis*) Draft Recovery Plan: First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN. 258 pp.

U.S. Fish and Wildlife Service (USFWS). 2007b. Running buffalo clover (*Trifolium stoloniferum*) Recovery Plan: First Revision. U.S. Fish and Wildlife Service, Fort Snelling, MN. 76 pp.

Woods, A.J., Omernik, J.M., Martin, W.H., Pond, G.J., Andrews, W.M., Call, S.M, Comstock, J.A., and Taylor, D.D., 2002, Ecoregions of Kentucky (color poster with map, descriptive text, summary tables, and photographs): Reston, VA., U.S. Geological Survey (map scale 1:1,000,000).